Through The Lens

A guide to digital photography for computer enthusiasts.
After the click of your camera, you're only half done!

Understanding Depth of Field

by Lynda Buske

Depth of field simply represents the distance between the nearest and farthest objects in your photo that are in acceptable focus. You may or may not like the depth of field chosen by your camera while in the automatic setting but you can easily take control by moving the dial to the aperture (f-stop) priority setting (A or Av on the dial). A low number aperture (large opening) creates a short depth of field whereas a high number (small opening) creates a long depth of field. With a short depth of field, part of your image will be in soft focus whereas with a long depth of field, typically all parts of your image will be in focus from the foreground to infinity. There is no right or wrong here; it is simply your preference for each photo. While shooting, I frequently change my depth of field by adjusting the aperture to get a particular effect. I may want a long depth of field for a landscape with foreground but then a short one for portraits or photographing flowers where a nice soft background (bokeh) keeps your eye focused on the subject.

If you zoomed to a distant object, keep in mind the depth of field is shorter than if you are not not zoomed at all. For example, with one of my cameras, when zoomed all the way with an aperture of f/8 (my smallest aperture) and focused on a point 100 feet away, the image will be sharp from 75ft to 150ft. When I'm not zoomed at all (widest angle), my depth of field ranges from 2ft to infinity.

Another effect on depth of field is the distance to the point of focus. The rule is: the farther the point of focus, the larger the depth of field. So like the example above, if the point of focus was at 50 feet instead of 100 feet, and you were zoomed all the way, only those objects from 48ft to 54ft would be sharp.

When zooming, it can be hard to hold the camera steady so a wide aperture will allow more light resulting in a faster shutter speed and less camera motion. However, the wider aperture reduces the depth of field. This can be a good technique for shooting distant animals or birds but make sure you focus exactly on the creature or your camera may end up focused on the leaf behind instead!

If you find later that you did not get the depth of field you wanted there are some photo editing adjustments that can be made on your PC using masking in conjunction with various effects. I will cover this in a future article.

In the automatic setting, your camera decides what is the optimal aperture and shutter speed combination for each photo. When you want to override this using aperture priority setting (A or Av), *you* are choosing the tradeoff between depth of field (aperture) and shutter speed. By opening the aperture wide you get more light, faster shutter speed and shorter depth of field. By

closing the aperture tight you get less light, slower shutter speed but greater depth of field. Experiment with different settings to see what effects you get for any particular scene. You may think you need an aperture of f/16 for a long depth of field but depending on the composition of your photo, you may only need an aperture of f/8 which will give you a faster shutter speed. [If you need an even faster shutter speed, you can also adjust the ISO setting which I will cover in a later article.] It takes a bit of practice to get to know how to use aperture settings to your advantage. Try shooting an entire day in aperture priority so it becomes second nature to make the adjustments. You may never go back to auto!

Aperture priority setting (A or Av)

Short depth of field

Long depth of field

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